Discipline designation	**Scientific practice (gaining experience) (ECTS 30)**
Subject/module code	IA3410
Science taught semester (s).	4th semester
Teacher in charge	Abdullaev Elnur Akhmatovich, Doctor of Philosophy (PhD) in Technical Sciences, Associate Professor. Anarboev Mukhiddin Almanovich, Doctor of Philosophy (PhD) in Technical Sciences, Associate Professor. Nazarov Furkat Daminovich, Doctor of Philosophy (PhD) in Technical Sciences, senior teacher. Yuldashe Urishbay, Doctor of Physics and Mathematics, professor. Parsoxonov Abdulkobi Gafurovich, Candidate of Physical and Mathematical Sciences, Associate Professor.
Teaching language	Uzbek
Connection to the curriculum	Compulsory
Academic activities	Total hours: 300 hours
ECTS	10
Discipline objectives / Learning Outcomes	The purpose of the discipline is to prepare a master's student for independent research work, the main result of which is the writing and successful defense of a master's thesis. **Learning outcomes** - the ability to apply methods of scientific knowledge in independent research activities, generate and implement innovative ideas; - own the methodology of scientific knowledge, be able to analyze and evaluate the content and level of philosophical and methodological problems when solving problems of research and innovation activities; - designing and conducting comprehensive, systematic scientific research based on knowledge and skills in the field of energy, including innovative studies; - have the skills to use modern information technologies to solve research and innovation problems; - conducting scientific research activities in the field of energy using modern research methods and information and communication technologies; - adapt the results of modern energy and technical research to solve problems in the electric power system.
Lessons' contents	1. Data collection at the place of scientific practice (internship) for the research topic 2. Approval of a plan for research work, determination of specific volumes and directions of scientific; 3. Get to know the scientific internship program and calendar plan 4. Preparation of an analytical review of the literature on the research topic 5.Development of experimental methodology 6.Carrying out theoretical and experimental work on the research topic 7.Material testing

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<tr><td></td><td>8.Presentation of practical research results at conferences
9.Development and justification of author’s proposals, principles, approaches, interpretations
10.Experimental testing</td></tr>
<tr><td>The exam format</td><td>Preparation of the report and its protection</td></tr>
<tr><td>Teaching/learning and examination requirements</td><td>No more than 3 days are allotted for drawing up the final report, during which masters put their individual plan in order, prepare written reports, and prepare presentations. Each masters submits the following materials:
- Report text;
- Individual plan and characteristics from the supervisor;
- Presentations of master's students-interns in electronic form.
The credit for research activities (practice) is accepted by the commission in accordance with the approved order, in the presence of all masters and their supervisors.
During the certification, the competencies of master's students-interns, which they mastered in the process of carrying out research activities (practice), are assessed.</td></tr>
<tr><td>CRITERIA for evaluating the tasks performed by students during their Master's degree scientific practice and research work and master's thesis preparation practice</td><td>
<table>
<tr><th>T/r</th><th>Name of events and tasks</th><th>Allocated points</th><th>Report form</th></tr>
<tr><td>1.</td><td>Collecting data from the organization of scientific practice (internship) on the research topic</td><td>0-10</td><td>A report is prepared and a presentation is made</td></tr>
<tr><td>2.</td><td>Approval of a plan for research work, determination of specific volumes and directions of scientific research (drawing up and approval of an individual work plan for a master’s student);</td><td>0-10</td><td>A report is prepared and a presentation is made</td></tr>
<tr><td>3.</td><td>Get to know the scientific internship program and calendar plan</td><td>0-10</td><td>A report is prepared and a presentation is made</td></tr>
<tr><td>4</td><td>Preparation of an analytical review of the literature on the research topic</td><td>0-10</td><td>A report is prepared and a presentation is made</td></tr>
<tr><td>5</td><td>Development of experimental methodology</td><td>0-10</td><td>A report is prepared and a presentation is made</td></tr>
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6	Carrying out theoretical and experimental work on the research topic	0-10	A report is prepared and a presentation is made
7	Material testing	0-10	A report is prepared and a presentation is made
8	Presentation of theoretical research results at conferences	0-10	A report is prepared and a presentation is made
9	Development and justification of author's proposals, principles, approaches, interpretations	0-10	A report is prepared and a presentation is made
10	Experimental testing	0-10	A report is prepared and a presentation is made

Note:

1. Assignments are prepared in handwritten form and are approved by the student with a signature on each page.
2. The assignment is prepared based on a prescribed sample and approved by the relevant authorities.
3. Completed assignments will not be evaluated if they do not meet the assessment criteria.

Recommended Literature

Main literature:

1. Hoshimov O.O., Imomnazarov A.T. Elektr mexanik tizimlarda energiya tejamkorligi. Toshkent-2015. "Fan va texnologiya" nashriyoti.
2. Yusupbekov N.R., Muxitdinov D.P.. Texnologik jarayonlarni modellashtirish va optimallashtirish asoslari. -T.: «Fan va texnologiya», 2015, 440 bet.
3. Toshpo'latov N.T., Qodirov D.B. Qayta tiklanuvchi energiya manbalari fanidan o'quv qo'llanma Toshkent – 2020 20-bet.
4. Raxmonov I.U. "Elektr ta'minoti asoslari". Darslik. Toshkent: 2019, 226 b.

Additional literature:

5. Hakimov T.H. Elektr taminoti tizimini montaji va ishlatish.O'quv qo'llanma. Toshkent - 2020. 319 b.
6. Taslimov A.D., Karimov R.Ch. «Energiyadan ratsional foydalanish va elektr energiya sarfini me'yorlash». O'quv qo'llanma. – T.: ToshDTU, 2020. – 160 b.
7. Hakimov T.H., Jalilov M.X. ва Niyozov N.N. Elektr texnologik qurilmalar. Darslik. Toshkent: - 2020. 402 b.
8. General Aspects of Energy Management And Energy Audit. Guide Book For National Certification Examination For Energy Auditors and Managers.
9. Xoshimov F.A., Taslimov A.D.. Energiya tejamkorligi asoslari. O'quv qo'llanma. – T.: "Voris", 2014 – 192 bet.

Internet resources:

www.ziyonet.uz – national educational materials search site.

	www.google.com – international educational materials search site. www.twirpx.com – international educational materials search site.